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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,614

04/09/2007

Hitoshi Takeuchi

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EXAMINER

KRAMER, DEVON C

ART UNIT

PAPER NUMBER

3683

MAIL DATE

DELIVERY MODE

07/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,614	Applicant(s) TAKEUCHI, HITOSHI	
	Examiner Devon C. Kramer	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>04/06 and 05/07</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

- 1) Claims 1-12 are objected to because of the following informalities:

Claim 1 line 3, "the outside circumference" should be –an outside circumference–
-;

Please note that the claims are replete with clarity issues and grammatical problems.

. Appropriate correction is required.

Claim Rejections - 35 USC § 112

- 2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 3) Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "a mounting section" in line 2. Then in line 5-6 recites, "the plurality of mounting portions". Applicant does not have antecedent basis for a plurality of mounting portions. It is assumed that the connecting arms are connected to the mounting section. Please note that this occurs throughout the claims, upon amending, please ensure the use of consistent language.

Claim 2 recites, "braking force is applied to said braking section by frictional heat". This is unclear to the examiner. Did applicant mean to claim that the braking force produces frictional heat.

It is not clear what is meant by claims 3-4. Shouldn't applicant have said, --the connecting arm section is constituted by one connecting arm.—

Claims 8-9 are unclear. Claim 8 states that the openings defined by the connecting portions are shaped like a polygon. Nowhere is it seen that the polygon is a hexagon for these openings defined by the connecting portion.

Please note that the claims are replete with clarity issues and grammatical problems which make the scope of the claims difficult to determine.

Claim Rejections - 35 USC § 102

4) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country; more than one year prior to the date of application for patent in the United States.

5) Claims 1-4, 7-9 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Seidl (DE3814680).

In re claims 1-4, 7-9, 11-12, Seidl provides a brake disc comprising: a mounting section (3) for the attachment to a wheel; a braking section (2) located at the outside circumference of said mounting section (3) for brake pads to be brought into sliding contact therewith; and a connecting arm section (4) for connecting the mounting section and said braking section; wherein connecting arms in said connecting arm section each extend from their respective ones of said plurality of mounting portions in one side

direction different from the radial direction of said braking section to reach said braking section; and wherein adjacent mounting portions are connected to each other at least through said connecting arm. (Figure 1) Please note that the disk is capable of use on a motorcycle.

In re claim 2, please note that connecting arms of Seidl are designed to deform during braking.

6) Claims 1-4 and 6-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Nago et al (6530457).

In re claims 1 and 3-4, 6-12, Nago et al provides a brake disc comprising: a mounting section (20) for the attachment to a wheel; a braking section (28) located at the outside circumference of said mounting section (20) for brake pads to be brought into sliding contact therewith; and a connecting arm section (38) for connecting the mounting section and said braking section; wherein connecting arms in said connecting arm section each extend from their respective ones of said plurality of mounting portions in one side direction different from the radial direction of said braking section to reach said braking section; and wherein adjacent mounting portions are connected to each other at least through said connecting arm. (Figure 1) Please note that the disk is capable of use on a motorcycle.

IN re claim 2, see col. 1 lines 35-50 and col 3 lines 20-40.

7) Claims 1-4 and 6-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Buckley et al (6003639).

In re claims 1 and 3-4, 6-12, Buckley provides a brake disc comprising: a mounting section (58) for the attachment to a wheel; a braking section (85) located at the outside circumference of said mounting section (20) for brake pads to be brought into sliding contact therewith; and a connecting arm section (57) for connecting the mounting section and said braking section; wherein connecting arms in said connecting arm section each extend from their respective ones of said plurality of mounting portions in one side direction different from the radial direction of said braking section to reach said braking section; and wherein adjacent mounting portions are connected to each other at least through said connecting arm. (Figure 14) Please note that the disk is capable of use on a motorcycle.

In re claim 2, see col. 5 lines 10-20.

Claim Rejections - 35 USC § 103

8) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9) Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seidl (DE3814680), Nago et al (6530457) or Buckley et al (6003639) in view of Tsuya et al (JP11022761).

Seidl, Nago et al and Buckley lack the teaching of the connecting arms being branched.

Tsuya et al teaches connecting arms which are branched or an arrangement where one arm can be considered a reinforcing arm.

It would have been obvious to one of ordinary skill in the art to have provided the connecting arms of either Seidl, Nago et al or Buckley with branch portions to add rigidity to the brake disk while maintaining a light weight.

Conclusion

10) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Johnson et al, Kotanino and Campbell teach brake disks with connecting arms.

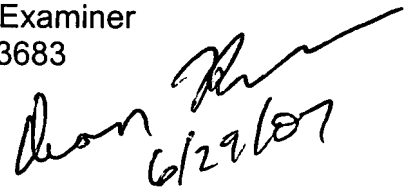
11) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devon C. Kramer whose telephone number is 571-272-7118. The examiner can normally be reached on Mon-Fri 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rob Siconolfi can be reached on (571)272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Devon C Kramer
Primary Examiner
Art Unit 3683

Handwritten signature of Devon C Kramer and the date 6/29/07.

DK